Weekly Influenza Surveillance Report

Maryland Department of Health and Mental Hygiene | Infectious Disease and Environmental Health Administration
Office of Infectious Disease Epidemiology and Outbreak Response

SYNOPSIS

In the last two weeks of 2010, influenza activity increased significantly in Maryland. All indicators of influenza activity have been climbing. The number of people seeking care for influenza-like illness (ILI), the number of rapid influenza tests being performed by sentinel laboratories, and the number of hospitalizations associated with influenza all increased. Also, one outbreak of influenza was reported.

Reports from the State Laboratories Administration point to a mix of influenza viruses currently circulating in Maryland. All three virus strains covered by the 2010-2011 vaccine (type A (H3), type A (H1N1), and type B) have been detected through PCR testing at the state laboratory. Type A (H3) is predominant, followed closely by type A (H1N1).

Based on these observations, influenza activity in Maryland is now "**LOCAL**", with lab-confirmed cases throughout the state and an influenza outbreak reported from one region.

INFLUENZA-LIKE ILLNESS SURVEILLANCE (ILINet)

During week 52, 9 sentinel providers reported 86 (4.1%) of 2,111 visits to their practices were for ILI. This is below the state baseline of 5.6% but elevated when compared to the last few weeks.

This same week last season, when influenza activity peaked late in October of 2009 and was on the decline by December, the proportion of visits for ILI was 3.2%.

For more information on the US Outpatient Influenza-like Illness Reporting Network (ILINet), please visit our website: http://dhmh.maryland.gov/fluwatch and click on "ILINet Sentinel Providers".

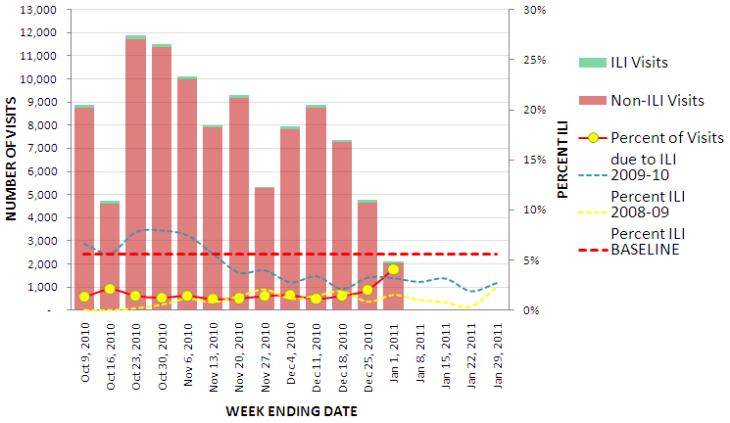

Figure 1. Number of visits and proportion of visits for ILI to ILINet sentinel providers, 2010-11 influenza season

CLINICAL LAB REPORTS OF RAPID FLU TESTING

During week 52, 19 clinical laboratories reported 98 (10.1%) of 972 rapid influenza tests as positive. Eighty-four were positive for type A, and 14 were positive for type B influenza. This proportion of positive tests was higher than the proportion reported at this time last season, which was 2%.

While not as accurate as PCR tests, rapid influenza tests become more accurate as the flu season progresses and influenza is more prevalent in the community. As a result, rapid influenza tests and their results are good indicators of who was sick enough to be tested and who truly has the flu.

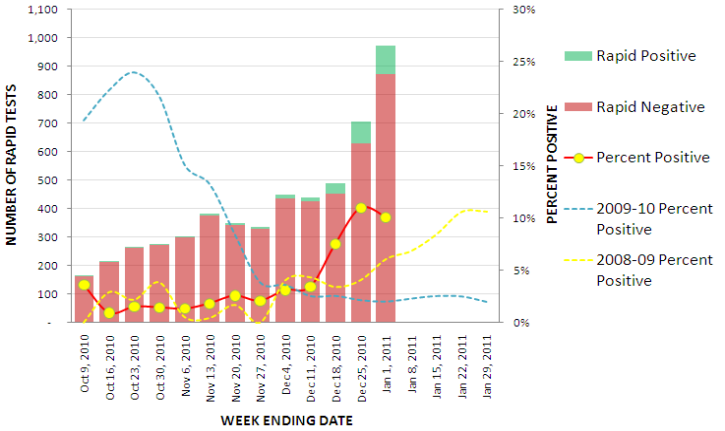

Figure 2. Number and result of rapid tests reported by clinical laboratories, 2010-11 influenza season

Type of Positives	Number (%)
Type A	223 (82%)
Type B	50 (18%)
Positive, but not typed	0
Total Positive	273 (100%)

Table 1. Number of positive rapid influenza tests, by type, reported by collaborating clinical laboratories, 2010-11 season

GET VACCINATED!

Go to http://dhmh.maryland.gov/swineflu/getVaccinated.html and find your local health department for more information.

MARYLAND RESIDENT INFLUENZA TRACKING SURVEY (MRITS)

During week 52, 616 (40.4% of total) participants in the MRITS responded to the weekly survey. Of those who responded, 17 (2.8%) reported flu-like illness. This proportion is higher than this same week last season, when about 1.7% of respondents reported flu-like illness.

We are always looking for more participants for the MRITS. If you know someone who would like to participate, please direct them to our website: http://dhmh.maryland.gov/flusurvey.

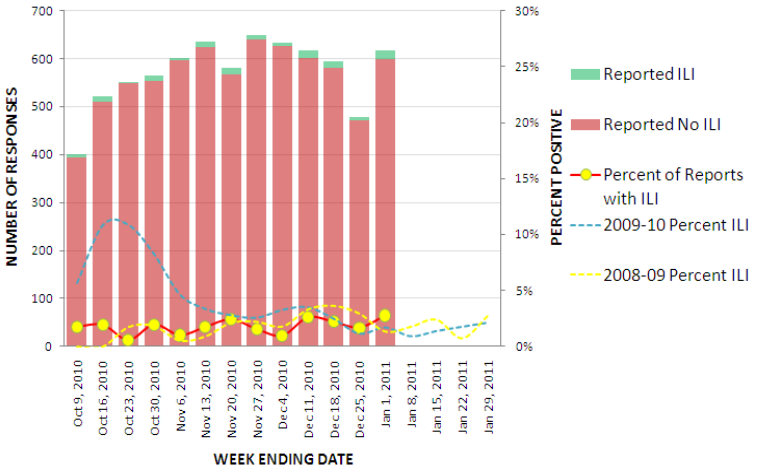

Figure 3. Number of responses and proportion reporting ILI to the MRITS by week, 2010-11 influenza season

DHMH LABORATORIES ADMINISTRATION REPORTS

During week 52, the DHMH Laboratories Administration performed a total of 20 PCR tests for influenza. Ten tested positive for influenza. Four were typed as type A (H1N1) and 6 were typed as type A (H3).

The table to the right shows the breakdown of positive tests by influenza strain for the 2010-11 influenza season.

More information on the valuable work done by the DHMH Laboratories Administration is available at http://dhmh.maryland.gov/labs.

Influenza Type	No. (%)
Type A	
H1	**18 (38%)**
H3	**26 (54%)**
Unsubtyped	**0 (0%)**
Type B	**4 (8%)**
TOTAL	**48 (100%)**

Table 1. Number of respiratory samples positive for influenza by PCR reported by the DHMH Labs Administration, 2010-11 influenza season

EIP INFLUENZA HOSPITALIZATION SURVEILLANCE

During week 52, 33 hospitalizations associated with influenza were reported to the Emerging Infections Program (EIP). To date, there have been 104.

To be a confirmed hospitalization associated with influenza, the person must be hospitalized and have a positive influenza test of any kind (rapid test, PCR, culture).

Last season, 15 hospitalizations were reported during week 40, with total of 1,335 from weeks 40 to 52. For the entire season (2009-10), 1,400 hospitalizations were reported.

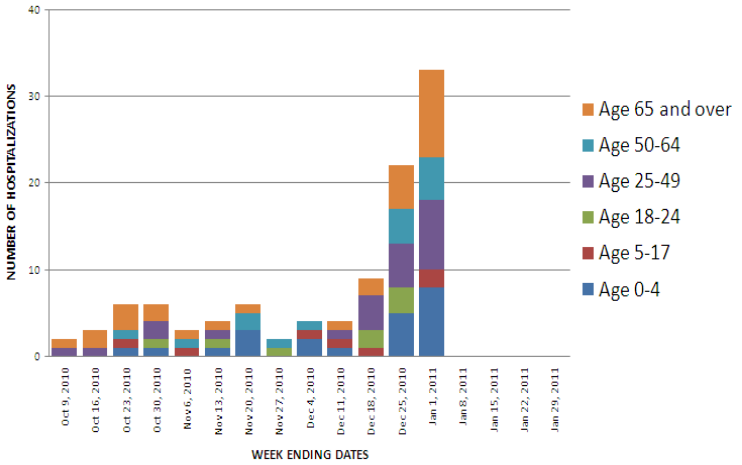

Figure 4. Number of hospitalizations associated with influenza, by age group and week, reported to the Emerging Infections Program, 2010-11 influenza season

DID YOU KNOW?

The Health Protection Agency in the United Kingdom has reported 50 confirmed deaths from influenza this winter. According to The Telegraph, "45 died with swine flu (H1N1) and five with another strain, flu type B." Also according to the report, "hospitals across the country begin cancelling planned operations to free up intensive care beds to deal with rising numbers of seriously ill flu patients." These kinds of reports are common in the winter all over the world, emphasizing the fact that influenza is a serious illness which has the potential to become life-threatening to even the healthiest of people.

REPORTS OF OUTBREAKS IN INSTITUTIONAL SETTINGS

During week 52, one outbreak of influenza was reported. Last season, a total of 208 outbreaks of respiratory illness were reported. Of those, 33 were confirmed as influenza outbreaks. Institutional settings include schools, hospitals, colleges and universities, and long-term care locations. An outbreak of ILI is re-classified as an outbreak of influenza if there is laboratory evidence of influenza virus present in the samples collected from case-patients during the outbreak.

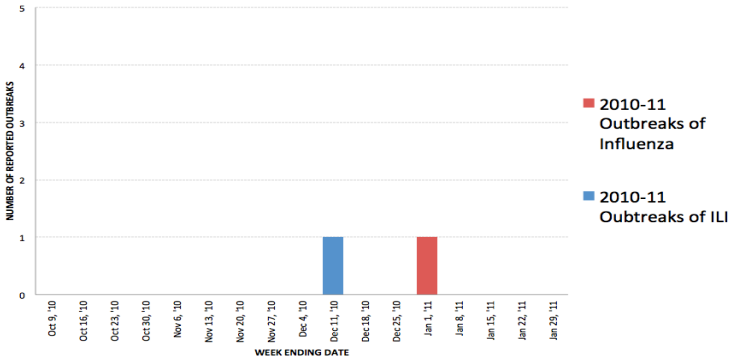

Figure 5. Number of outbreaks reported by week and by type during the 2009-10 influenza season. This graph will be updated as more outbreaks are reported this season.

EMERGENCY DEPARTMENT ILI REPORTS (ESSENCE)

During week 52, a total of 41,184 visits to emergency departments for all reasons were reported to the Office of Preparedness and Response through the ESSENCE system. Of those visits, 1,121 (2.7%) were for influenza-like illness. This proportion is slightly higher than those observed over the prior two influenza seasons.

For more information on ESSENCE, please visit the Office of Preparedness and Response's web site at: http://bioterrorism.dhmh.state.md.us.

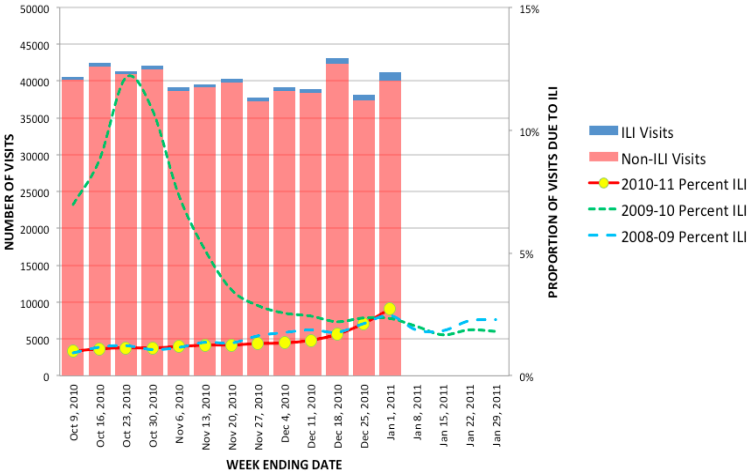

Figure 6. Number and proportion of visits to emergency departments for ILI by week reported through ESSENCE, 2010-11 influenza season.

GOOGLE FLU TRENDS

According to Google, influenza activity in Maryland is currently "**MODERATE**". What does this mean? From the Google Flu Trends Website: "We have found a close relationship between how many people search for flu-related topics and how many people actually have flu symptoms. Of course, not every person who searches for 'flu' is actually sick, but a pattern emerges when all the flu-related search queries are added together. We compared our query counts with traditional flu surveillance systems and found that many search queries tend to be popular exactly when flu season is happening. By counting how often we see these search queries, we can estimate how much flu is circulating in different countries and regions around the world."

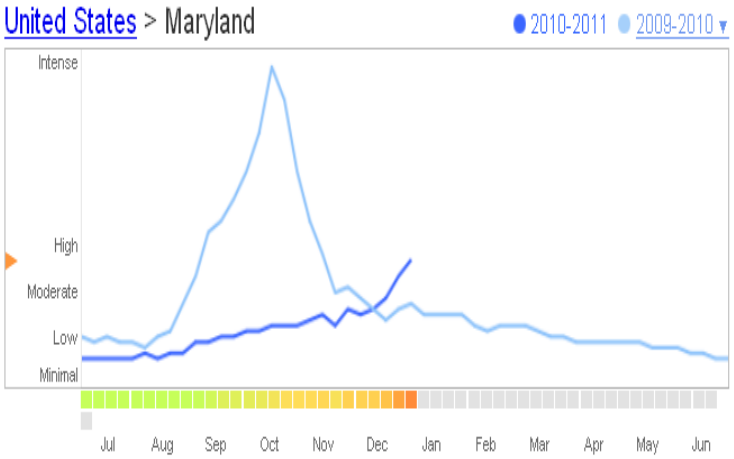

Figure 7 – According to Google Flu Trends, influenza activity in Maryland is currently "moderate". At this time last year, during the 2009 H1N1 influenza pandemic, influenza activity in Maryland was "low" to "moderate".

DID YOU KNOW?

Influenza strains are usually named after the source or location of the first case. In 1918, it was called the "Spanish" flu since the first reports to the public about the pandemic came out of Spain, though the first cases may have originated in the US or Europe. In 2009, H1N1 was called the "Swine Flu" because it contained genes of a flu virus that commonly infects pigs. Its scientific name, however, is influenza A/California/2009.

OFFICE OF INFECTIOUS DISEASE EPIDEMIOLOGY AND OUTBREAK RESPONSE

201 W. PRESTON ST.

BALTIMORE, MD 21201

PHONE: 401-767-6700

FAX: 410-669-4215

VISIT US ON THE WEB:

http://dhmh.maryland.gov

ALL THE INFORMATION INCLUDED IN THIS REPORT IS PROVISIONAL AND SUBJECT TO CHANGE AS MORE DATA ARE RECEIVED FROM SURVEILLANCE SOURCES.

THE INFORMATION INCLUDED IN THIS REPORT IS NOT INTENDED TO BE USED FOR INDIVIDUAL DIAGNOSES.

ONLINE VERSION OF THIS REPORT AND PAST SEASONS' REPORTS MAY BE DOWNLOADED AT:

http://dhmh.maryland.gov/fluwatch

FLU SURVEILLANCE IN NEIGHBORING STATES:

DELAWARE-

HTTP://BIT.LY/9Zkp3

DC-

http://tinyurl.com/yj7br9e

PENNSYLVANIA-

http://tinyurl.com/37323xn

VIRGINIA-

http://tinyurl.com/kmnaeu

WEST VIRGINIA-

http://tinyurl.com/39m2kon

CDC NATIONAL INFLUENZA SURVEILLANCE REPORT (http://cdc.gov/flu/weekly)

During week 52 (December 26, 2010 – January 1, 2011), influenza activity in the United States decreased slightly.

- Of the 4,911 specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories and reported to CDC/Influenza Division, 995 (20.3%) were positive for influenza.
- The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold.
- One influenza-associated pediatric death was reported and was associated with Influenza B virus infection.
- The proportion of outpatient visits for influenza-like illness (ILI) was 2.6%, which is above the national baseline of 2.5%. Four of the 10 regions (Regions 2, 3, 4, and 5) reported ILI above region-specific baseline levels; six states and New York City experienced high ILI activity, two states experienced moderate ILI activity, six states experienced low ILI activity, 35 states experienced minimal ILI activity, and data were insufficient from the District of Columbia and one state.
- The geographic spread of influenza in eight states was reported as widespread; Puerto Rico and 16 states reported regional influenza activity; the District of Columbia and 11 states reported local influenza activity, and Guam, the U.S. Virgin Islands, and 15 states reported sporadic influenza activity.